

## United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/521,073	07/06/2005	Roland Kratzer	09086-00217-US	4476	
23416	7590 06/15/2006		EXAM	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207			PASTERCZYK, JAMES W		
WILMINGTON, DE 19899			ART UNIT	PAPER NUMBER	
	•		1755		
			DATE MAILED: 06/15/2006	6	

Please find below and/or attached an Office communication concerning this application or proceeding.

		$\sim$	
	Application No.	Applicant(s)	_
<b>0</b>	10/521,073	KRATZER, ROLAND	
Office Action Summary	Examiner	Art Unit	
	J. Pasterczyk	1755	
The MAILING DATE of this communication a Period for Reply	appears on the cover sheet wit	h the correspondence address	
A SHORTENED STATUTORY PERIOD FOR REF WHICHEVER IS LONGER, FROM THE MAILING  - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory perior  - Failure to reply within the set or extended period for reply will, by stat Any reply received by the Office later than three months after the ma earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNIC 1.136(a). In no event, however, may a re od will apply and will expire SIX (6) MON tute, cause the application to become AB.	CATION.  ply be timely filed  I'HS from the mailing date of this communication.  ANDONED (35 U.S.C. § 133).	
Status			
1)☐ Responsive to communication(s) filed on  2a)☐ This action is FINAL.	his action is non-final. vance except for formal matte	•	
Disposition of Claims			
4) ☐ Claim(s) 1-20 is/are pending in the application 4a) Of the above claim(s) is/are withd 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-20 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and	rawn from consideration.		
Application Papers			
9) The specification is objected to by the Exami 10) The drawing(s) filed on is/are: a) a Applicant may not request that any objection to the Replacement drawing sheet(s) including the correction.  The oath or declaration is objected to by the	ccepted or b) objected to the drawing(s) be held in abeyandection is required if the drawing(	ce. See 37 CFR 1.85(a). s) is objected to. See 37 CFR 1.121(d).	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority docume 2. Certified copies of the priority docume 3. Copies of the certified copies of the priority docume application from the International Bure * See the attached detailed Office action for a li	ents have been received. ents have been received in Apriority documents have been eau (PCT Rule 17.2(a)).	oplication No received in this National Stage	
Attachment(s)  Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/0 Paper No(s)/Mail Date 1/12/05, 2/14/05.	Paper No(s	ummary (PTO-413) /Mail Date formal Patent Application (PTO-152) 	

Application/Control Number: 10/521,073

Art Unit: 1755

1. Claims 1 and 10-13 are objected to because of the following informalities: in claim 1, the capital letters denoting each separate ingredient in the catalyst should all be in parentheses for the sake of clarity and consistency; in 1. 5 make "Wherein" lower case; in 1. 9 change "or" to a comma; in 1. 13 change the first "or" to a comma; in 1. 18 change the period to a comma or semicolon. In claim 10, change "type" to --group containing--. In claim 11, p. 7 of the preliminary amendment, 1. 2, change "en" to --an--; in 1. 17 insert a comma after "halogen"; in 1. 18 change "be joined" to --are joined--; in 1. 21 change "can each be" to --are each--; on p. 8, 1. 4, insert --or-- between the second and third chemical groups, on 1. 9 change "can each be" to --are each--; on p. 9, 1. 10-11, the "cycloalkyl or" portion looks like it belongs in 1. 10 after the "alkyl" portion. In claim 12, 1. 3, delete the first "are identical, in 1. 4 insert --two-- after the second "or", and in 1. 5 delete the two commas and insert a comma after "group". In claim 13, 1. 2, change "are" to --is--; on p. 12, 1. 1, change "the" to --their--, and end the following line with a semicolon instead of a period; still on p. 12, end 1. 15 with a semicolon. Appropriate correction is required.

Page 2

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, 1. 3, (B) is recited as being an organometallic compound. This requires that at least one of the R<sup>1-3</sup> groups be a hydrocarbyl bonded to M<sup>1</sup> via a carbon atom, yet as currently recited such a bond is not required. Organometallic also requires that the M<sup>1</sup> atom be a metal, yet in many dependent claims M<sup>1</sup> may be boron which has no metallic properties whatsoever.

Application/Control Number: 10/521,073 Page 3

Art Unit: 1755

hence the use of the term "organometallic" appears to contradict the specifics of the limitation on (B), although the definition of M<sup>1</sup> explicitly requires it be *inter alia* a group 13 metal.

In claims 3 and 15-18, boron is recited as being part of the metal compound of formula V from claim 1, yet as recited above boron has no metallic properties and thus is not in fact a metal.

In claim 6, p. 5 of the amendment, l. 6, change the first "or" to a comma, insert a comma before the second "or" and delete "R<sup>4</sup> is". Claim 9 should be likewise amended.

In claim 11, p. 7 of the amendment, l. 6, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). In l. 12 of that page correct M to the proper symbol for this instance of a metal atom. On p. 8 of the amendment, l. 4-5, correct the superscripts on the R variables; in the definitions of R<sup>15A</sup>, correct the superscripts on the various M variables; on p. 9 of the amendment, l. 6, the last three groups are missing a second valence as the pervious page l. 11 requires.

In claim 13, p. 11,  $6^{th}$  line from the bottom, add the proper superscript to X in the text; on p. 12, do the same to the second line from the end.

In claims 19 and 20, second line of each, correct "Lewis acid" to --Lewis base--.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

<sup>(</sup>a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 1755

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnen et al., USP 6,482,902 (hereafter referred to as Bohnen I) in view of Bohnen, USP 6,417,302 (hereafter referred to as Bohnen II).

Page 4

Bohnen I discloses the invention substantially as claimed when one considers that the combination of the active hydrogen-containing group (C) of the present claims plus the organometallic compound (B) of the present claims corresponds to the ingredient d) of col. 2, l. 35-54 and examples 1-4 of the prior art (col. 2, l. 14 to col. 3, l. 16; col. 3, l. 41 to col. 5, l. 31; examples 1-4, 6, 8, 11, 13, 17-25).

Bohnen I lacks disclosure of combining the all the reagents simultaneously without isolation of intermediates, i.e. a "one-pot" synthesis.

However, Bohnen II teaches that combining reagents to make a one-pot synthesis of similar catalysts is conventional in the art (examples 1 and 7; col. 1, l. 47 to col. 6, l. 39).

It would have been obvious to one of ordinary skill in the art to apply the teaching of Bohnen II to the disclosure of Bohnen I with a reasonable expectation of obtaining a highly-useful method of making a supported catalyst with the expected benefit of fewer steps and thus lower cost of production.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/521,073 Page 5

Art Unit: 1755

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SUPERVISORY PATENT EXAMINER

J. Pasterczyk

AU 1755

6/1/06